

Amendments to Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (original): A method of secure discovery of access nodes in a mobile communication network comprising the steps of:

providing a mobile terminal with information identifying a first access node prior to handoff to another access node;

after handoff of the mobile terminal to a second access node, receiving at the first access node a message from the second access node requesting verification of information provided by the mobile terminal to the second access node; and

verifying the information provided by the mobile terminal to the second access node before updating information on candidate access nodes in the mobile communication network.

Claim 2 (original): The method of claim 1 wherein the information on candidate access nodes in the mobile communication network is recorded in a candidate access node table that is shared among mobile terminals in the mobile communication network.

Claim 3 (original): The method of claim 1 wherein the information identifying the first access node comprises the network address of the first access node.

Claim 4 (original): The method of claim 1 wherein the information provided by the mobile terminal to the second access node comprises a ticket generated by the first access node for the mobile terminal.

Claim 5 (original): The method of claim 1 wherein the information provided by the mobile terminal to the second access node is verified by measuring delay occurring during the handoff of the mobile terminal to the second access node.

Claim 6 (currently amended): The method of claim 5 wherein timestamps recorded by the first access ~~router~~node and the second access ~~router~~node are utilized to measure the delay occurring during the handoff of the mobile terminal to the second access ~~router~~node.

Claim 7 (original): The method of claim 1 wherein the information provided by the mobile terminal to the second access node comprises an identifier for the mobile terminal and wherein the information is verified by checking whether the mobile terminal that provided the information to the second access node is the same mobile terminal that communicated with the first access ~~node~~ prior to handoff.

Claim 8 (original): The method of claim 1 wherein the message from the second access node is authenticated.

Claim 9 (original): The method of claim 1 wherein a limit is placed on a number of messages received from the mobile terminal prior to verifying the information provided by the mobile terminal to the second access node.

Claim 10 (original): The method of claim 1 wherein the mobile terminals are Internet Protocol (IP) devices and wherein the access nodes are IP routers.

Claim 11 (original): An access node comprising memory for storing information on candidate access nodes in a mobile communication network and a processor that executes device-readable instructions for performing the steps of:

 providing a mobile terminal with information identifying the access node prior to handoff to another access node;

 after handoff of the mobile terminal to a second access node, receiving a message from the second access node requesting verification of information provided by the mobile terminal to the second access node; and

verifying the information provided by the mobile terminal to the second access node before updating the information on candidate access nodes in the mobile communication network.

Claim 12 (original): The access node of claim 11 wherein the information provided by the mobile terminal to the second access node comprises a ticket generated by the access node for the mobile terminal.

Claim 13 (original): The access node of claim 11 wherein the information provided by the mobile terminal to the second access node is verified by measuring delay occurring during the handoff of the mobile terminal to the second access node.

Claim 14 (original): The access node of claim 11 wherein the information provided by the mobile terminal to the second access node comprises an identifier for the mobile terminal and wherein the information is verified by checking whether the mobile terminal that provided the information to the second access node is the same mobile terminal that communicated with the access node prior to handoff.

Claim 15 (original): The access node of claim 11 wherein the message from the second access node is authenticated.

Claim 16 (original): The access node of claim 11 wherein the access node further comprises an Internet Protocol (IP) routing circuit.

Claim 17 (original): A mobile terminal comprising memory and a handoff processing circuit that performs the steps of:

prior to handoff to another access node, receiving information identifying a first access node and a ticket generated by the first access node;

storing the ticket and the information identifying the first access node in the memory;

after handoff to a second access node, providing the ticket and the information identifying the first access node to the second access node, so that the second access node can verify the ticket with the first access node prior to updating information on candidate access nodes in the mobile communication network.

Claim 18 (original): The mobile terminal of claim 17 wherein the ticket can be utilized by the access nodes to measure delay occurring during the handoff of the mobile terminal to the second access node.

Claim 19 (original): The mobile terminal of claim 17 wherein the ticket comprises an identifier for the mobile terminal and wherein the ticket is verified by checking whether the mobile terminal that provided the information to the second access node is the same mobile terminal that communicated with the first access node prior to handoff.

Claim 20 (original): The mobile terminal of claim 17 wherein the mobile terminal is an Internet Protocol (IP) device.

Claim 21 (currently amended): A method of secure discovery of access nodes in a mobile communication network, where the access nodes provide access to a packet communication network, comprising the steps of:

receiving from a mobile terminal a candidate access node list associated with and stored at the mobile terminal;

updating the candidate access node list associated with the mobile terminal to reflect candidate access nodes discovered by the mobile terminal in the mobile communication network; and

providing the mobile terminal with the updated candidate access list associated with the mobile terminal.

Claim 22 (original): The method of claim 21 wherein the candidate access node list is represented as a bitmap whose bits correspond to entries in a candidate access node table.

Claim 23 (currently amended): The method of claim 21 wherein the candidate access node list is digitally signed at an access node prior to providing the candidate access node list to a mobile terminal.

Claim 24 (currently amended): The method of claim 21 further comprising the step of establishing a key for secure message exchange between an access node and ~~with the~~ mobile terminal before communicating with the mobile terminal.

Claim 25 (original): The method of claim 21 wherein the mobile terminals are Internet Protocol (IP) devices and wherein the access nodes are IP routers.

Claim 26 (currently amended): An access node for providing access to a packet communication network from a mobile communication network, the access node comprising memory for storing information on candidate access nodes in ~~a~~ the mobile communication network and a processor that executes device-readable instructions for performing the steps of:

- receiving from a mobile terminal a candidate access node list associated with and stored at the mobile terminal;
- updating the candidate access node list associated with the mobile terminal to reflect candidate access nodes discovered by the mobile terminal in the mobile communication network;
- and
- providing the mobile terminal with the updated candidate access list associated with the mobile terminal.

Claim 27 (original): The access node of claim 26 wherein the information on candidate access nodes in the mobile communication network is represented as a candidate access node table and wherein the candidate access node list is represented as a bitmap whose bits correspond to entries in the candidate access node table.

Claim 28 (original): The access node of claim 11 wherein the access node further comprises an Internet Protocol (IP) routing circuit.

Claim 29 (currently amended): A mobile terminal comprising memory for storing a candidate access node list and a handoff processing circuit that performs the steps of:

providing to an access node in a mobile communication network the candidate access node list associated with the mobile terminal, the access node providing access to a packet communication network;

receiving from the access node an updated candidate access node list that reflects candidate access nodes discovered by the mobile terminal in the mobile communication network; and

storing the updated candidate access node list in the memory.

Claim 30 (original): The mobile terminal of claim 29 wherein the candidate access node list is represented as a bitmap whose bits correspond to entries in a candidate access node table stored in the access node.

Claim 31 (original): The mobile terminal of claim 29 wherein the mobile terminal is an Internet Protocol (IP) device.